"Description of two new Fossil Shells from the Upper Amazon." By T. A. Conrad.

Analysis of Graphite from Wythe County, Virginia. By E. GOLDSMITH.—Of all the varieties of Graphite that have come under my notice, I have never seen any resembling that which was given to me recently by Mr. John C. Trautwine, C. E. It is compact massive; the touch is smooth. If cut with a knife or scratched with the finger nail, it shows a bright dark metallic lustre. The fracture is rough, uneven, dull. The color is dark blue, so that the mineral greatly resembles the massive earthy vivianite of New Jersey. The powder has the same color.

Talc makes an impression on it, hence its softness is less than one. Lines drawn with it on paper are of a dark gray hue, similar to common soft lead pencil marks. Specific gravity = 2.1068. The blowpipe reactions, as well as my qualitative analysis, showed that beside the carbon a large proportion of silica, alumina, and iron oxides, also a trace of manganese, were present. The mineral contains a considerable amount of gas, the quantity and reactions of which I had not the means to ascertain.

The quantitative determinations of the amount of moisture and gases, the carbon, and ashes were found in the same manner as is usually adopted in the analysis of anthracite.

These were the results:—

Carbon	29.12.
Ashes	60.61.
Gases and moisture . . .	10.27.

Showing that the mineral may be regarded as a very impure graphite.

MAY 12.

The President, Dr. RUSCHENBERGER, in the chair.

Twenty-seven members present.

Notice of some New Fresh-water Rhizopods.—Prof. LEIDY remarked that besides the ordinary species of *Amœba*, which he had observed in the vicinity of Philadelphia, he had discovered what he suspected to be a new generic form. It has all the essential characters of Amœba, but in addition is provided with tufts of tail-like appendages or rays, from which he proposed to name the genus OURAMŒBA.

The rays project from what may be regarded as the back part of the body as the animal always moves or progresses in advance of the position of those appendages. The rays are quite different from pseudopods, or the delicate rays of the Actinophryens.

They are not used in securing food, nor is their function obvious. The *Ouramœba* moves like an ordinary *Amœba*, and obtains its food in the same manner. The tail-like rays are not retractile, and they are rigid and coarse compared with those of Actinophryens. They are simple or unbranched, except at their origin, and they are cylindrical, of uniform breadth, and less uniform length. When torn from the body they are observed to originate from a common stock attached to a rounded eminence.

Several forms of the *Ouramœba* were observed, but it is uncertain whether they pertain to one or several species. One of the forms had an oblong ovoid body about the $\frac{1}{8}$th of a line long and $\frac{1}{12}$th of a line broad. The tail-like rays formed half a dozen tufts, measuring in length about the width of the body. The latter was so gorged with large diatomes, such as *Navicula viridis*, together with desmids and confervæ, that the existence of a nucleus could not be ascertained. The species may be distinguished with the name of OURAMŒBA VORAX.

A second form, perhaps of a different species, moved actively and extended its broad pseudopods like *Amœba princeps*. When first viewed beneath the microscope it appeared irregularly globular and about the $\frac{1}{14}$th of a line in diameter. It elongated to the $\frac{1}{6}$th of a line, and moved with its tail-like appendages in the rear. These appendages formed five tufts about the $\frac{1}{25}$th of a line long. The interior of the body exhibited a large contractile vesicle and a discoid nucleus. This second form may be distinguished with the name of OURAMŒBA LAPSA.

Another *Ouramœba* had two comparatively short tufts of rays, and a fourth, of smaller size than the others, had a single tuft of three moniliform rays.

It is possible that *Ouramœba* is the same as the *Plagiophrys* of Claparede, though the description of this does not apply to that.

Plagiophrys is said to be an Actinophryen, furnished with a bundle of rays emanating from a single point of the body, but the rays are described as of the same kind and use as those of *Actinophrys*. *Plagiophrys* is further stated to be provided with a distinct tegument like *Corycia* of Dujardin, or *Pamphagus* of Bailey, but the body of *Ouramœba* is as free from any investment as an ordinary *Amœba*, and the rays are fixed tail-like appendages with no power of elongation or contraction.

The species of *Ouramœba* were found among desmids and diatomes, on the surface of the mud at the bottom of a pond, near Darby Creek, on the Philadelphia and West Chester Railroad.

Two of the commonest species of *Difflugia* of our neighborhood I had until recently confounded together as *D. proteiformis*, and, perhaps, the two forms may be included under the latter name in Europe. In one the mouth is deeply trilobed, and the animal is usually green with chlorophyl globules. In the other the mouth

is crenulate, usually with six shallow crenulations, and the animal is devoid of chlorophyl. The former is usually the smaller, and may be distinguished with the name of D. LOBOSTOMA; the latter may be named D. CRENULATA.

In an old brick pond, on the grounds of Swarthmore College, Delaware County, among *Difflugia pyriformis*, *D. spiralis*, *D. corona*, *D. acuminata*, and others not yet determined, there occurs an abundance of a large species, apparently undescribed. It is sometimes the fourth of a line in length, and is compressed pyriform, but is quite variable in its relation of length to breadth, and in the shape of the fundus of the shell. This is often trilobate, but from the non-production of one or more or all the lobes, differs in appearance in different individuals. The animal is filled with chlorophyl grains, from which it might be named D. ENTOCHLORIS.

Another large *Difflugia*, allied to *D. lageniformis*, is not unfrequent about Philadelphia. The shell is beautifully vase-like in shape. It has an oval or sub-spherical body with a constricted neck, and a recurved lip to the mouth. The body of the shell opposite the mouth is acute and often acuminate. The animal contains no chlorophyl. One shell measured $\frac{1}{6}$ of a line long by $\frac{1}{8}$ of a line broad; another measured $\frac{1}{4}$ of a line long by $\frac{1}{7}$ of a line broad. The species may be named D. AMPHORA.

A Difflugian, found in a spring on Darby Creek, is interesting, from its transparency, which allows the structure of the animal to be seen in all its details. The investment is membranous and apparently structureless. The soft granular contents occupy about one-half of the investment, and are connected with this by long threads. The pseudopods are protruded in finger-like processes. The form of the animal is compressed ovoid, with the narrow pole truncate and forming the transversely oval mouth. It is probably the species *Difflugia ligata*, described by Mr. Tatem, of England. Its length is about $\frac{1}{33}$d of a line. The character of the investment is so different from that of ordinary Difflugians that the species may be regarded as pertaining to another genus, for which the name of CATHARIA would be appropriate.

Dr. CHAPMAN made the following remarks on the *generative apparatus of the Tebennophorus Carolinensis*:—

Various have been the interpretations offered from time to time of the generative organs of the Gasteropoda. Thus Cuvier considered what is now regarded as an hermaphroditic organ to be the ovary. Later observers regarded this hermaphroditic organ as the testicle, and considered what is now supposed to be an albuminous gland the ovary, and which Cuvier regarded as part of the testicle. With reference to these views, I have recently dissected the Tebennophorus Carolinensis, a slug found often in our environs under trees, etc., and found both ova and spermatozoa in the organ regarded first as simply the ovary, later as the

testicle. I take the opportunity of acknowledging the assistance afforded me in my dissection by Dr. Leidy's beautiful monograph on the Gasteropoda.

MAY 19.

Dr. KENDERDINE in the chair.

Twenty-five members present.

The Veins of Beech and Hornbean Leaves.—Mr. THOMAS MEEHAN said that De Candolle had noticed some years since a difference in the venation between the *Fagus ferruginea* and *Fagus sylvatica*, the common American and European beeches. In the American beech the lateral veins were said to terminate in the apex of the serratures—in the European they terminate at the base of the sinus. He had not read the original paper of De Candolle, but abstracts in the scientific serials. As the statement stood, it conveyed the idea that there was a marked difference in structure between these two allied species which did not, however, exist, as growing in this country the leaves of the European beech are almost entire; the lateral veins, in approaching the margin of the leaves, curve upwards, and connect with the lateral above them, forming a sort of marginal vein near the outer edge of the leaf. The veins of the American beech curve upward in the same way, but are early arrested, and this sudden cessation of growth produces the serra, which are slightly curved upwards. An early arrestation of growth in the veins makes the serratures, and constitutes the only difference between the two species. The structural plan is the same in both—the European, curving its lateral vein into the apex, reached the upper one—the American terminating abruptly.

There was a greater tendency to marginal development in some European than in allied American species. In the *Carpinus Betulus*, the English Hornbean, there were from four to five teeth between each pair of lateral nerves, while there were but from two to three between those of the American—*Carpinus Americana*—a character that was quite as distinctive between these two very closely allied species, as the viens were in the case of the beech.

Direct Growth Force.—Mr. MEEHAN referred to some potatoes exhibited by him to the Academy a few years ago, in which the stolons of a grass had penetrated through from one side to the other, preferring, as it would seem, to go through such an obstruction to turning aside to avoid it. A potato was a rather rough surfaced body. He now exhibited a similar case, only the obstruction was the round smooth root of an herbaceous peony. Though not more than one-third of an inch thick and round, a